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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/633,473	08/07/2000	Kishan B. Shah	1151	4627

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EXAMINER

DASTOURI, MEHRDAD

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/633,473

Applicant(s)

SHAH, KISHAN B.

Examiner

Mehrdad Dastouri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objection

1. Claim 4 is objected to because of the following informalities:

In Line 1 of Claim 4, "the method.of" Should be corrected to "the method of" to delete the period.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-3, 5, 8-10 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Cushman et al (U.S. 5,905,820).

Regarding Claim 1, Cushman et al disclose a method of recognizing at least one object in a digitized representation of an image, comprising:

receiving the digitized representation of the image, the representation having a first resolution (Figure 2, Step 24);

creating a reduced-resolution version of the image responsive to the digitized representation of the image, the reduced-resolution version of the image having a

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second resolution lower than the first resolution (column 2, Lines 3-6; Figure 2, Step 30; Column 3, Lines 65-67, Column 4, Lines 1-7); and

identifying a value of each of at least one recognition parameter using the reduced resolution version of the image (Figure 2, Step 34; Figures 9 and 10; Column 4, Lines 11-22; Column 5, Lines 10-34. Threshold sets $t_1=32$, $t_2=64$ and $t_3=128$ are examples of recognition parameters utilized for discriminating different types of text); and

recognizing the at least one object represented in the digitized representation of the image responsive to the value of each of the at least one recognition parameter identified (Figures 4-7, 9 and 10; Column 5, Lines 10-67, Column 6, Lines 1-18).

Regarding Claim 2, Cushman et al further disclose the method of Claim 1 wherein the identifying step comprises:

providing a plurality of sets of values of at least one parameter (Figures 9 and 10; Column 5, Lines 35-57);

for each of the sets of at least one parameter, identifying a confidence level of recognition by attempting to recognize from the reduced-resolution version of the image the at least one object responsive to the at least one parameter in the set (Figures 4-7, 9 and 10; Column 5, Lines 10-67, Column 6, Lines 1-18. Confidence level of recognition is identified based on the frequency of different grey level values in an area under consideration. For text, confidence level of recognition comprises of large number of pixels with a very dark grey level and a large number of pixels with a very

light grey level. A histogram with these characteristics provide a high confidence value for recognition of the text in the document.); and

selecting at least one of the values of the at least one parameters in the set responsive to the confidence levels identified (Column 5, Lines 22-35).

Regarding Claim 3, Cushman et al further disclose the method of Claim 2 wherein the selecting step comprises selecting a value of each of at least one parameter corresponding to a highest confidence level from a plurality of the confidence levels identified (Figures 4-7, 9 and 10; Column 5, Lines 10-67, Column 6, Lines 1-18).

Regarding Claim 5, Cushman et al further disclose the method of Claim 1 wherein the creating step comprises calculating an average of at least one value of a plurality of pixels of the digitized representation of the image (Column 2, Lines 3-6).

With regards to Claim 8, arguments analogous to those presented for Claim 1 are applicable to Claim 8.

With regards to Claim 9, arguments analogous to those presented for Claim 2 are applicable to Claim 9.

With regards to Claim 10, arguments analogous to those presented for Claim 3 are applicable to Claim 10.

With regards to Claim 12, arguments analogous to those presented for Claim 5 are applicable to Claim 12.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 6, 7 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cushman et al (U.S. 5,905,820).

Regarding Claim 4, Cushman et al disclose the method of Claim 2 wherein the selecting step comprises selecting a value of each of at least one parameter corresponding to a confidence level (Figures 4-7, 9 and 10; Column 5, Lines 10-67, Column 6, Lines 1-18).

Cushman et al do not explicitly consider the confidence level exceeding a threshold.

Identifying a threshold for confidence level is well known in the art (Official Notice).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Cushman et al invention to identify a threshold for confidence level because it is

With regards to Claim 6, arguments analogous to those presented for Claim 4 are applicable to Claim 6. Cushman et al further disclose recognizing at least one additional object represented in the digitized representation of the image responsive to the value of at least one recognition parameter identified (Figure 10, recognition of graphics).

With regards to Claim 7, arguments analogous to those presented for Claims 4 and 6 are applicable to Claim 7.

With regards to Claim 15, arguments analogous to those presented for Claims 1 and 6 are applicable to Claim 15.

With regards to Claim 16, arguments analogous to those presented for Claim 2 are applicable to Claim 16.

With regards to Claims 17 and 20, arguments analogous to those presented for Claims 1, 6 and 7 are applicable to Claims 17 and 20. Cushman et al disclose different types of text and graphics as first, second and third objects (Figures 1, 9 and 10; Column 3, Lines 21-28).

With regards to Claim 18, arguments analogous to those presented for Claim 4 are applicable to Claim 18.

With regards to Claim 19, arguments analogous to those presented for Claim 6 are applicable to Claim 19.

Other prior art cited

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,867,277 to Melen et al is cited for a reduced resolution document storage and retrieval system.

U.S. Patent 5,770,841 to Moed et al is cited for a system and method for reading package information.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehrdad Dastouri whose telephone number is (703)

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305-2438. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9143 for regular communications and (703) 872-9143 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center Customer Service Office whose telephone number is (703) 306-0377.



Mehrdad Dastouri
Patent Examiner
Group Art Unit 2623
April 21, 2003